Challenge TB - Ethiopia

Year 1

Annual Report

October 1, 2014 – September 30, 2015

October 30, 2015

Cover photo:

National 'Childhood TB Prevention and Control Roadmap' launching workshop held from July 30-31, 2015, by the FMOH in collaboration with Challenge TB project. Participants were from FMOH/Disease prevention directorate, all regional health bureau representatives, Ethiopian Pediatric Society, TB and Child health program staff, partners and donors have attended this event. NTP manager (left) briefing on the scope and relevance of the document and(right) representatives of FMOH, WHO, USAID, UNICEF. (Credit: Kefene Mitike)

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Disclaimer

The authors' views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

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List of Abbreviations and Acronyms

ACF – Active Case Finding
AFB – Acid Fast Bacteria
ALERT – All African Leprosy Rehabilitation and Training Center
CCM – Country Coordinating Mechanism
CSA – Central Statistic Authority
CTB – Challenge TB
CTBC – Community TB care
EFY – Ethiopian Fiscal Year
EPTB – Extra-pulmonary tuberculosis
EQA – External Quality Assurance
FMOH – Federal Ministry of Health
GF – Global Fund
GLRA – German Leprosy Relief Association
HC – Health center
HCW – Health Care Worker
HEAL-TB – Help Ethiopia to Address Low case detection rate
HF – Health Facility
HMIS – Health Management Information System
HP – Health post
ICCM – Integrated Community Case Management
IMNCI – Integrated management of Neonatal & childhood Illness
IPLS – Integrated Pharmaceutical Logistics System
LMIS – Logistic Management Information System
LOI – Letter of Intent
MOT – Modification of Tracker
MSH – Management science for Health
NSP – National Strategic Plan
NTP – National TB program
OR – Operational Research
PFSA – Pharmaceutical Fund and Supply Agency
PMDT – Programmatic Management of Drug Resistance TB
PTB – Pulmonary Tuberculosis
RDQA – Routine Data Quality Assurance
RHB – Regional Health Bureau
RRL – Regional Referral Laboratory
SNNPR – Southern Nation Nationalities People Region
SOP – Standard Operating Procedure
STTA – Short term Technical Assistance
TA – Technical Assistance
TB IC – TB Infection Control
TFC – Treatment Follow up Center
TIC – Treatment Initiation Center
TRAC – Tuberculosis Research Advisory Committee
TWG – Technical Working Group
UNICEF – United Nations Children's' Fund
USAID – United States of Agency for International Development
WHO – World Health Organization

1. Executive Summary

Ethiopia is one of the 22 high TB burden countries in the world with an estimated incidence and prevalence of 224 and 211 per 100,000 pop respectively. According to the latest 2014/15 report by NTP, 134,343 patients (all forms) were notified, giving a case detection rate (all forms) of 67%. The country attained a treatment success rate of 89% for the cohort of new bacteriologically confirmed TB cases reported in 2013/14.

The Global Fund (GF) is the major external funder for TB care and prevention in Ethiopia. NTP received round 10 (2012-16) which was utilized to finance key TB activities, procurement of first and second lines anti-TB drugs, microscopes, laboratory reagents, etc. Besides the GF grant, a significant contribution is made by USAID. The Challenge TB (CTB) project is one of the mechanisms for USAID TB portfolio in Ethiopia, among others like HEALTB and PHSP.

The lead partner for the CTB project in Ethiopia is KNCV Tuberculosis Foundation (KNCV), with and collaborating partners MSH and WHO. KNCV provides an overall oversight and is the main implementer for most of the proposed activities. MSH is responsible for the laboratory activities in the regions, aiming to enhance quality and utilization of diagnostic services, including EQA. MSH is also responsible for TA to supply management at the national level. WHO, within its mandate as global policy agency, provides technical support on national policy update & development, fostering partnership, leadership and programmatic management. The total obligated budget for year 1 was US 2,869,200. The first year of Challenge TB (CTB) support focused on establishing the basis for strong technical assistance for TB care and prevention in the two big regions (Tigray and Southern Nations / SNNP) of Ethiopia and providing critical support to the national TB control program (NTCP) while at the same time setting the ground for urban TB control work focusing on key populations in the country.

The key results of year 1 CTB support are:

- CTB regional support: the first approach for a comprehensive regional TB control program support was to establish CTB regional presence with competent technical teams in the two regions (Tigray, SNNPR) with assistance from central CTB office in Addis Ababa and KNCV HQ. A baseline situational assessment was conducted in the selected zones in the two regions using comprehensive assessment tools that cover all key aspects of TB control. The final summary of the assessment report was shared with the regional health offices and used as input for year 2 planning. The baseline information will enable the project to evaluate progress and impact of CTB over the next years of the project.

- The national childhood TB prevention and control roadmap was finalized, endorsed and disseminated to all key stakeholders in the country. This roadmap is an important guiding document to: i) improve the level of attention given for childhood TB control in the country; ii) identify key interventions and priority areas to be implemented at the primary and community health care level, such as integrated childhood TB care at health facilities as part of integrated management of neonatal and childhood illness (IMNCI) and integrated community case management (ICCM), and; iii) emphasize the need for implementation of preventive measures (IPT for children under 5 years).

- CTB procured and distributed 32 LED FM microscopes for the two regions to be used in high volume health facilities [14 for Tigray and 18 for SNNP regions] which will improve access to more sensitive and quality smear microscopy.

- Building on progress made with TB CARE I support to data quality and operational research, NTP made TB data quality improvement a major agenda item in year 1 of CTB. This resulted in the development and integration of a routine data quality assessment tool in the regular supportive

supervision checklist and an organized series of capacity building trainings for HMIS staff at different levels in collaboration with the respective regional health offices.

- With the aim of promoting implementation of a well targeted and coordinated national TB research agenda, CTB supported technically and financially the national TB Research Advisory Committee (TRAC). This committee organized the annual TB research conference from March 21-23, 2015. CTB also supported the regular TRAC core members meeting conducted for the purpose of reviewing the national OR roadmap including for the development of a long term TB research strategy and priority TB research agenda setting. A competitive grant was announced by CTB for regional TB control teams to submit LOI on the current TB research agenda and six relevant TB OR teams were selected for full proposal development.

- The regional presence of CTB teams has been instrumental in catalyzing the regional TB, TB/HIV and MDR-TB programmatic coordination through the establishment of regional Technical Working Groups that will monitor performance and provide technical implementation guidance; provide technical support in the revision & update of program specific supportive supervision checklists; and facilitate/support the regular TB program supportive supervision of zonal and woreda offices. In addition, CTB supported financially the woreda based planning aimed follow up the annual primary health care plan implementation.

2. Introduction

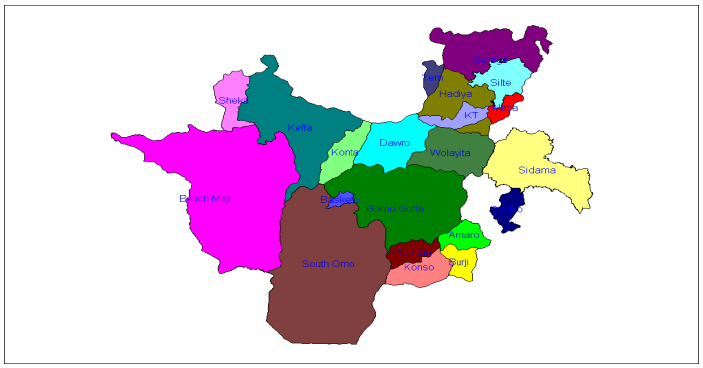
The Federal Ministry of Health (FMOH) revised its national strategic plan (NSP) after the external national TB program review in July 2013, and TB CARE I actively participated during the review process and financially supported the process including expenses related to international technical assistance. This updated NSP runs from 2013/14-2020. The mission of the National TB Program (NTP) is to reduce morbidity, mortality and disability from TB and Leprosy through implementation of preventive, curative and rehabilitative health and related services in collaboration with all stakeholders guided by its vision to see "Ethiopia free from TB and Leprosy".

The Challenge TB (CTB) strategic approach is to support FMOH/NTP in carrying out the planned NSP for 2013/14-2020. CTB in Ethiopia operates as a coalition of three partners: KNCV (lead), MSH and WHO. Total budget for Year 1 amounts to US 2,869,200. The major intervention areas for Challenge TB support were identified based on the gap analysis of the external TB program review (Aug 2013), USAID TB portfolio Review (Sept 2013) and of the2014 GF concept note.

CTB focus strategic areas are: 1) national level technical assistance on key programmatic leadership and implementation issues; 2) comprehensive regional level support and technical assistance (SNNPR and Tigray); 3) address urban TB related problems (Addis Ababa, Dire Dawa, and Harari). The selection of the two regions supported by CTB, (SNNPR and Tigray), is based on their large population and limited support from other partners in these regions. CTB will invest to build critical technical capacity to enhance TB control in these regions. The model of support focuses on capacity building of regional and district health bureaus and TB focal points on TB program management and implementation. The approach will involve supporting TB-specific supervision that includes quality improvement checklists and mentorship and support on how to analyze and use data for decision making and programming. At a regional level, CTB will also provide technical support for the regional referral laboratories (RRLs) in both regions. The project has 3 offices: one central office in Addis Ababa and two regional offices, one in Tigray and one in SNNPR. In each office there are technical and operational staff to implement the project activities according to the annual work plan. The central office staff provides technical support to the NTP at national level and supervises and provides overall support to regional CTB offices.

1. Southern regional office/SNNPR (CTB geographic area)

The Southern Nations, Nationalities and People's Region (SNNPR) is located in the Southern and South-Western part of Ethiopia. It is bordered with Kenya to the South and Sudan to the South West. Based on a 2007 census report of Central Statistics Authority (CSA), the current estimated total population size of the region is 18,976,724, which accounts for 20% of the national population. The population density of the region is 142 persons per sq.km, which makes the region one of the most populous parts of the country.



Picture 1: The map for zonal administration of SNNPR

There are 23 public hospitals, 702 health centers, 3,835 health posts and 201 private and NGO health facilities in the region. Among the total of 4,761 health facilities, 676 health facilities provide TB diagnostic service (i.e lab microscope) and a total of 2,961 health facilities provide DOTS. Currently there are 5 MDR treatment initiating centers, 60 treatment follow-up centers and 18 Gene x-pert sites in the region. Although the regional data on the TB incidence and prevalence is not available, the burden of the disease is estimated to be high, consistent with the national data. The HMIS report indicated that a total of 30,002 tuberculosis cases of all forms were notified by health facilities in SNNPR in 2007 EFY. Among these, 15,624 (52%) were smear positive PTB, 9,200 (31%) were smear negative PTB, 4,529 (15%) were EPTB and the rest 2.1% were relapse cases.

According to the EPHI HIV related estimates and projections for Ethiopia released in 2012, the adult HIV prevalence for SNNPR was 0.8% (urban 2.2% and rural 0.5%). The 2014/15 data on TB/HIV co-infection was 6% and only 56% of TB patients screened for HIV in SNNP region.

2. Tigray region (CTB geographic area):

Tigray Region is in the Northern part of the country. It borders Eritrea to the North and Sudan to the west, while on the east it shares the regional border with Afar and in the south, Amhara. It is sub-divided into seven administrative zones, 52Woredas (districts) and 792 Kebelles. Currently, 1 specialized Hospital, 16 General Hospitals, 7 primary Hospitals, 222 health centers (HCs), and 668 health posts (HPs) are available in the region. Total population size is 5,128,532 (2014GC CSA Pop projection), and more than 80% of the population resides in the rural areas, with livelihoods derived from agriculture.

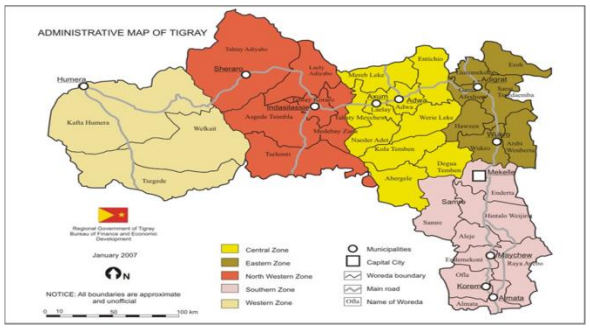
The HMIS report indicated that a total of 9,594 tuberculosis cases of all forms were notified by health facilities in Tigray region in 2007 EFY. Among these, 2,039 (21%) were smear positive PTB, 3,822 (40%) were smear negative PTB, 3,535 (37%) were EPTB and the rest 2% were relapse cases

The 2014/15 data on TB/HIV co-infection was 8.9% and 80% of TB patients were screened for HIV in Tigray region.

According to the EPHI HIV related estimates and projections for Ethiopia released in 2012, the adult HIV prevalence in Tigray was estimated at 1.6% for 2012(1% among males, 1.9% among females, urban 3.5%, rural0.7%).

A study conducted in Tigray Region showed that the overall prevalence of bacteriologically confirmed PTB was found to be 216/100,000 (95% CI: 202.08, 230.76) and this is higher than the national survey result which was 108/100,000. [Berhe et al. BMC Infectious Diseases 2013, 13:44]

Picture 2: The map for zonal administration of Tigray



3. Country Achievements by Objective/Sub-Objective

Objective 1. Improved Access

Sub-objective 1. Enabling environment

1.1 Provision of service according to the national guidelines by all care providers to all risk groups:

Based on local evidence and NTP assessments, one critical gap for TB control is that there is no national guidance and standards of care for TB care and prevention in prisons. Therefore, engaging prison administrations in TB control at national level to develop a national TB control strategy has been prioritized in year one.

1.4 Provider side: patient-centered approach integrated into routine TB services by all care providers for a supportive environment:

Planned key activity for year one mainly focused on enhancement of referral networks: community to health centers, from hospitals to health centers, sample referrals, etc.

Key Results

- In year 1, it was planned to conduct a national assessment of the prison TB situation and come up with workable recommendations. It was then found that there are already several assessment reports at different levels in the country. Through a series of meetings conducted with NTP and key stakeholders (e.g. GLRA, WHO, etc), there was consensus to conduct a desk review of the already available reports/findings which could provide adequate information on the major gaps regarding the situation of TB in prison in the country. The review included all nationally available documents, assessment & workshop reports including published papers and international documents. The findings (general status and best practices, opportunities and gaps) will be used as input for the development of a national strategy and implementation plan in year 2.

- Strong referral network and linkage is necessary to improve patient-centeredness, efficient health service utilization and increased access to essential diagnostics and treatment facilities. In order to address the referral and linkage problems, the regional team used the information from the situational assessment, reviewed existing tools, and developed a draft regional standard operating procedure for patient referral and linkage. The document will further be reviewed and enriched through stakeholders' consultation.

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target Y1	Result Y1
1.1.3.	Status of national policy for prison	**Description:** status of national policy for prison **Indicator Value:** 0=no policy; 1=policies or laws for prison have been enacted; 2=prison policy has been piloted in limited settings; 3=prison policy implemented nationally **Level:** National **Numerator:**yes, no	0	1	0 Desk review conducted to gather all available information on prison & TB situations in the country
1.4.5	Provider delay	**Description:** Number of days from sputum collection to initiation of treatment. Note that this measurement requires an operations research using a validated tool. **Indicator Value:** Number (mean/range) of days **Level:** National and/or Challenge TB geographic areas	N/A	N/A	Not measured, because it was not year 1 SOW

Sub-objective 2. Comprehensive, high quality diagnostics

2.1 Access to quality TB diagnosis ensured

The project planned for enhanced LED microscope utilization in high volume facilities. Major activities for year one focused on collection ofinformation on the status (availability, functionality/use) of microscopes (LED & ZN) in the two CTB regions and to increase the availability of LED microscopy services in selected health facilities.

2.2 EQA network for lab diagnostics and services functioning

Decentralize EQA in the two regions: Year one was to develop decentralization plan for the two regions both for microscopy and Culture & DST based on a situation assessment and stakeholders meetings

2.4 Access, operation and utilization of rapid diagnosis (i.e. Xpert) ensured for priority population

The project had planned to improve utilization of Xpert in the two regions by conducting orientation/sensitization workshops for clinical staff and to support the regular supportive supervision of Xpert sites to improve utilization. The regional baseline assessment will be used to assess Xpert networks & performance in the two regions over the life of the project. Please see results below.

2.6 Expedite laboratory specimen transport & results feedback system operational

The project planned to enhance coverage of a specimen transport system to underserved facilities in the two regions. The project conducted a situational assessment of the sample referral system. The overall coverage in Tigray from the three zone assessed was only 8.9% and from the four zones of SNNPR only 10.5% of facilities were linked in the sample referral system.

Achievements and outstanding issues:

- In line with improving the access to quality and using new technology for smear microscopy, CTB procured and delivered to the two regions 32 LED FM microscopes[14for Tigray and 18 for SNNP regions]. However, these microscopes didn't reach health facilities in SNNPR yet, as CTB could not deliver these directly due to the regulation on logistics management in the region (SNNPR) which doesn't allow doing so. In Tigray all 14 microscopes were distributed to high volume facilities, with other high volume facilities still being without an LED microscope. In addition, there is training gap in health facilities with LED microscope and facilities lack FM reagent preparation equipments (distiller).

- Situational assessment on EQA status was conducted in the two regions, in the SNNPR the EQA decentralization process yet to be supported in year two, but in Tigray decentralization plan developed and endorsed by the region. Further decentralization process will be supported by CTB in year 2.

- In Tigray region a total of 110 (F=47) and in SNNPR 120 (F=22) laboratory staff were trained on ZN AFB microscopy and EQA to expand quality assured microscopy service in the two regions. The course was 5 days, comprising of 30% practical and 70% theoretical sessions. This training will increase the coverage of ZN AFB microscopy service in the 7 CTB supported zones of the two regions.

- In the Tigray region CTB organized a consultative workshop with the main objective to improve the performance and quality of TB diagnostics in the region. The objectivesof the workshop included: 1) scaling up utilization of smear microscopy using LED FM; 2) increase access and utilization of GeneXpert; 3) strengthening EQA in the region, and; 4) enhancing sample referral linkage. During the workshop the results of situational assessment were presented, major gaps and challenges discussed and proposed solutions with action plans developed. A responsible body from the regional lab and health bureau designated to follow up progress and action plans.

- The project did not manage to implement trainings for the sensitization of clinical staff and supportive supervision to enhance Xpert utilization, as well as start the decentralization process in the two regions, by implementation of a specimen transport system for underserved facilities. The main reason for this was delayed approval of the year one workplan, as well as the time needed to set up new offices in the two regions (including staff recruitment) and conducting comprehensive baseline assessments after developing the necessary assessment tools with the support of central team.

Picture 3.Laboratory trainees on practical sessions of smear preparation, staining and microscopic reading

Picture 4: Handing over LED FM Microscope by CTB stff to Regional Health Bureau

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target Y1	Result Y1
2.1.1.	# of laboratories performing microscopy (stratified by LED florescence, Ziehl-Neelsen)	**Description:** Number of laboratories performing microscopy (stratified by LED florescence, Ziehl-Neelsen) **Indicator Value:** Number **Level:** National and Challenge TB geographic areas **Numerator:** Number of laboratories performing microscopy (stratified by LED florescence, Ziehl-Neelsen)	SNNPR / ZN= 107, FM=2 Tigray / ZN=96, FM=6	Target not set as high volume facilities are not known in the two regions	SNNPR / FM=20 Tigray / FM=20
2.2.1	#/% of laboratories enrolled in EQA for smear microscopy	**Description:** Proportion of laboratories enrolled in External Quality Assessment for smear microscopy **Indicator Value:** Percent **Level:** National and Challenge TB geographic areas **Numerator:** Number of laboratories enrolled in EQA for smear microscopy **Denominator:** Totalnumber of laboratories performing smear microscopy	SNNPR: 63/126 (50%) Tigray: 68/117 (58%)	100% Year 1 SOW is to develop decentralization plan	CTB supported Tigray region to develop de-centralizatio n plan

2.2.3	#/% of laboratories enrolled in EQA for culture/DST	**Description:** Proportion of laboratories enrolled in EQA for culture/DST **Indicator Value:** Percent **Level:** National and Challenge TB geographic areas **Numerator:** Number of laboratories enrolled in EQA for culture/DST **Denominator:** Total number of all laboratories performing culture/DST	Culture /DST labs are one per region; and it's 1/1 (100%) per region	100% (2/2) for both regions	100% (2/2)
2.2.4.	#/% of laboratories showing adequate performance in external quality assurance for DST	**Description:** Performance of EQA is just as important as having EQA established. This indicator measures the percent of laboratories enrolled in EQA for culture/DST that successfully passed EQA in the last reporting period. **Indicator Value:** Percent **Level:** National and Challenge TB geographic areas **Numerator:** Number of laboratories that successfully passed EQA for culture/DST **Denominator:** Total number of all laboratories enrolled in EQA for culture/DST	SNNPR = 1 Tigray = 1 Total CTB regional lab (culture/DST) = 2	2/2 (100%)	National ref lab conducted panel test, both regions performance result will be available in 2 weeks time
2.4.6.	#/% of new TB and Rif-resistant cases diagnosed using GeneXpert	**Description:** Proportion of new TB cases diagnosed using GeneXpert **Indicator Value:** Percent **Level:** National and Challenge TB geographic areas **Numerator:** Number of new TB cases diagnosed using GeneXpert **Denominator:** Total number of new TB cases	SNNPR: MTB+ =82/344 (23.8%) and RR =4/344 (1.2%) Tigray: MTB+ =14/95 (14.7%) and RR=9/95 (9.5%)	target set SNNPR = 516 Tigray = 142	Activity initiated – no results available yet
2.6.4.	# of specimens transported for TB diagnostic services	**Description:** Number of specimens transported for TB diagnostic services via a specimen transport system **Indicator Value:** Number **Level:** National and Challenge TB geographic areas **Numerator:** Number of specimens transported for TB diagnostic services via a specimen transport system	SNNPR = 58 Tigray = 43 (samples referred for Xpert & culture)	Not set SNNPR = 87 Tigray = 64	Activity initiated – no results available yet

Sub-objective 3. Patient-centered care and treatment

3.1 Ensured intensified case finding for all risk groups by all care providers

In APA 1, under this intervention area CTB project planned for finalization of: a) a childhood TB roadmap and the development of updated training materials to improve the diagnosis and care of childhood TB in the country; b) Develop CTBC strategy for agrarian, pastoralist and urban population; c) Support NTP in developing a strategy based on the local relevant policies, guidance and best practices. Please see result section

3.2 Access to quality treatment & care ensured for TB, DR-TB & TB/HIV for all risk groups from all care providers

In APA 1, under this intervention area CTB planned activity was to enhance linkage between TIC, TFC and community TB care: Planned activities were to identify key barriers and define best practices from the baseline assessment conducted in the two regions and to standardize practices with HEAL TB/USAID project areas and to assess the needs to set up CoE at ALERT hospital.

Ensure adequate patient support package: the conducted baseline assessment has tried to explore issues related to patient support package (e.g. is GF support adequate? etc). However, this has been done only from key informant perspective (program staff) and patients & providers perspective have not been assessed.

Establish regional TB & PMDT technical teams: recruited competent regional CTB staff to support the RHB in defining and implementation of their objectives and activities.

Improve quality of TB service: adapted / developed assessment tool to measure progress on standard of TB care at health facility level. Please see result section

Key Results:

- Ethiopia is one of few nations translating the global childhood TB task force recommendations into action, a National childhood TB prevention & control roadmap developed, endorsed and launched by the NTP and child health program that has implementation guidance for an integrated service at the IMNCI/ ICCM as key entry point of care for presumptive TB in children.

- The national community TB care strategy (targeted approach for urban, agrarian, pastoralist) revision and enhancement have been initiated through CTB technical and financial support, national task force with specific TOR established, implementation assessment tools developed, and national documents of the community TB care strategy started.

- Situational assessment to establish center of excellence (CoE) at ALERT and St Peter hospital was conducted by KNCV international experts as part of STTA. Gaps were identified and incorporated in APA2 action plan.

- The status of the patient support package in the two regions has been assessed, and there will be further consultation and discussion at national NTP and RHB level to improve patient care and support at all level. For example, the baseline assessment has tried to explore whether GF support is adequate, what type of support is provided, etc. This has been done only from key informant perspective (i.e. program staff) but patients & providers perspective have not been assessed. In addition, CTB has continued to support the patient package at ALERT hospital in Addis Ababa.

- CTB established competent regional technical teams in the two regions and in year one CTB started to provide technical assistance in the two regional health bureaus in achieving their planned objectives and activities related to TB, MDR-TB & TB/HIV during joint supportive supervision, program implementation review, capacity buildings, etc.

- The project developed a quality of care assessment tool (QUAL-TB tool) through the process of adaptation, modification and improvement of available standards (local, international).

- Installation of a septic tank was done for Yirgalem Hospital, SNNPR region, as part of MDR TB ward renovation which was done during TB CARE I.

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target Y1	Result Y1
3.1.3.	Case notification rate	**Description:** The number of TB cases (all forms) reported by the NTP **IndicatorValue:** Number **Level:** National and Challenge TB geographic areas **Numerator:** Number of all TB cases (bacteriologically confirmed + clinically diagnosed; includes new & relapse cases) reported in the past year	National (2013)= 133/100,000 CNR (2013) SNNPR= 131/100,000 Tigray = 163/100,000		National (2014)= 151/100,000 CNR (2014) SNNPR=168/100,000 Tigray=195/100,00
3.1.4.	# of MDR-TB cases diagnosed	**Description:** Total number of MDR/XDR cases diagnosed **Indicator Value:** Number **Level:** National and Challenge TB geographic areas **Numerator:** Number of MDR/XDR cases diagnosed during the reporting period (MDR-TB is inclusive of XDR-TB cases)	598 (2014)	National: 628 Tigray = NA SNNPR=NA	National: 648 Tigray=55 SNNPR=129
3.1.16.	CTBC services implementation	Description: #/% of Health Posts (HP) providing the minimum package of CBTC services (Suspect identification and referral + adherence support + defaulter tracing + recording & reporting + health education for TB); adapted indicator to reflect Ethiopian health care system set up Indicator Value: Level: evaluation area (representative sample of region) Source: HP survey Means of Verification: HP records Numerator: # of HP providing minimum CTBC package Denominator: total # of HP in evaluation area	SNNPR=88% (82/93) Tigray=88% (22/30)	For the two CTB regions = 100%	Activity initiated

3.1.8.	# of TB cases (all forms) diagnosed among children (0-14)	**Description:** This indicator measures proportion of TB cases (all forms) diagnosed in children 0-14 years of age. When childhood TB is a priority, being able to report on and measure changes in case notification by age group is important. **IndicatorValue:** Percent **Level:** National and Challenge TB geographic areas **Numerator:** Number of TB cases (bacteriologically confirmed + clinically diagnosed; includes new & relapse cases) diagnosed in children 0-14 years of age in the past year. **Denominator:** Total number of all TB cases (bacteriologically confirmed + clinically diagnosed; includes new & relapse cases) reported in the past year	4025 cases (2014 national); Tigray 2014 (266); SNNPR 2014 (568)	5% increase from baseline (but there is data quality problem)	Activity initiated National (2014) 18,140 (all forms of TB, 0-14 yrs) NB – currently no data by regions
3.2.4.	# of eligible patients with drug-resistant TB enrolled on second-line treatment (disaggregated by sex, age and urban/rural)	**Description:** The proportion of eligible patients with drug resistant TB (RR-TB/MDR-TB/XDR-TB) enrolled on second-line treatment (not the cumulative number on treatment) in the reporting period (disaggregated by sex, age [0-4, 5-14, adults], and urban/rural) **Indicator Value:** Percent **Level:** National and Challenge TB geographic areas **Numerator:** The number of patients diagnosed with drug resistant TB (RR-TB/MDR-TB/XDR-TB) enrolled on second-line treatment in the reporting period **Denominator:** Total number of patients diagnosed with drug resistant TB (RR-TB/MDR-TB/XDR-TB) in the reporting period	National (2013)= 598 CTB regions - SNNPR= no data Tigray= no data	National= 865 SNNP= 204 Tigray=86	National (2014) = 597 SNNPR= 42 Tigray=67
3.2.7.	Treatment success rate for MDR-TB patients on treatment	**Description:** The proportion of laboratory-confirmed MDR-TB patients successfully treated (cured plus completed treatment) among those enrolled on second line anti-TB treatment during the year of assessment (where applicable disaggregation by HIV status, XDR status). **Indicator Value:** Percent **Level:** National and Challenge TB geographic areas **Numerator:** Number of	National= 75% (2013/14)	78%	Y1 results not available yet

		laboratory-confirmed MDR-TB patients successfully treated (cured plus completed treatment) **Denominator:** Total number of laboratory-confirmed MDR-TB patients enrolled on second line anti-TB treatment during the year of assessment.			
3.2.13.	% TB patients (new and re-treatment) with an HIV test result recorded in the TB register	**Description:** The purpose is to assess how many TB patients know their HIV status, regardless of whether testing was done before or during TB treatment. In settings where HIV is driving the TB epidemic, all TB patients should be offered and encouraged to have an HIV test. **Indicator Value:** Percent **Level:** National and Challenge TB geographic areas **Numerator:** Number of TB patients registered over a given time period with an HIV test results recorded in the TB register. **Denominator:** Total number of TB patients registered over the same time period.	77% (2014)	80%	Tigray=67.8% SNNPR=57.4%
3.2.26	#/% Woredas with CBTC officer	Description: [Adjust CTBC indicator to reflect Ethiopian program structure] Number of Woredas with CBTC focal person/HEW coordinator (besides the TB Woreda coordinator) in place; Indicator Value: Level: region Source: RHB records Means of Verification: Woreda Health office records Numerator: Number of Woredas with person in place Denominator:Total number of Woreda's in the region	SNNPR= 41/41 (100%) Tigray = 27/27 (100%)	100%	100%

Objective 2. Prevention

Sub-objective 4. Targeted screening for active TB

4.1 Contact investigation implemented and monitored:

Contact investigation has been the national policy and it is in the national TB, TB/HIV guidelines, however, there was no lower level guidance, SOPs or M&E tools on CI. Therefore, in year one the plan

was to adapt tools such as SOPs and M&E tools developed under HEAL-TB, to improve performance of CI in the two regions.

Provision of IPT for household contacts of children under 5yrs in the two regions: there is a national R & R (unit TB register) to monitor implementation. However, this indicator is not reportable be it at regional or national level.

4.2 TB social determinants identified, appropriate intervention designed, implemented and monitored:

In APA 1, planned SOW under this intervention area is to develop ACF strategy and guide: country specific ACF strategy using the WHO risk prioritization tool would be necessary for a targeted and effective approach to improve case finding and care.

And, to start implementation of integrated childhood TB management and this will be a learning pilot project as there is no experience and new for NTP, integrated childhood TB care in selected health facilities would provide lesson for future plan.

Key Results

- Available tools for implementation of contact investigation (e.g. M & E tools, SOPs) were reviewed, although the national TB register lacks some information, e.g. follow up information. Therefore, adaptation of M&E tools from the HEAL-TB experience would require the agreement/endorsement of the two CTB supported regions.

- The sensitization of NTP staff to develop an ACF strategy (based on the WHO risk prioritization tool) has been done through external TA. However, a stakeholders meeting and risk prioritization exercise at national level have not done due to competing priorities for the NTP.

- A guidance document has been finalized, printed and disseminated for implementation of integrated childhood TB management in the country. However, pilot implementation could not be started in year 1 for the reason that, NTP has been engaged with other priority agendas and the development of training material, job aids & M&E tools have been postponed to Oct/Nov 2015.

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target	Result
				Y1	Y1
4.1.2.	#/% of children (under the age of five) who are contacts of bacteriologically-confirmed TB cases that are screened for TB	**Description:** The proportion of children (<5) who are contacts of bacteriologically-confirmed TB cases that are screened for TB (investigations for TB must be performed in accordance with existing national guidelines) **Indicator Value:** Percent **Level:** National and Challenge TB geographic areas **Numerator:** Number of children (<5) who are contacts of bacteriologically-confirmed TB cases that are screened for TB **Denominator:** Total number of children (<5) who are contacts of bacteriologically-confirmed TB	Baseline assmt result: Tigray: 111/1141 (10%) SNNPR: 47/339 (14%)	N/A	National policy was developed, implementation is planned for APA2.

		cases			
4.2.1.	Status of active case finding	**Description:** This indicator measures the level to which active case finding (ACF) policy is implemented in the country. **Indicator value:** Score based on below: 0=no ACF policies or practices implemented; 1=policies or laws supporting ACF have been enacted; 2=ACF policy has been piloted/introduced in limited settings; 3=ACF policy implemented nationally **Level:** National	0	1	0
4.2.6.	#/% of referrals from RMNCH programs/providers that are diagnosed with TB	**Description:** Proportion of referrals from RMNCH (Reproductive, Maternal, Newborn and Child Health) programs/providers that are diagnosed with TB (both bacteriologically confirmed and clinically diagnosed) **Indicator Value:** Percent **Level:** National and Challenge TB geographic areas **Numerator:** Number of referrals from RMNCH programs/providers that are diagnosed with TB (all forms) **Denominator:** Total number of referrals from RMNCH programs/providers	No baseline available due to no experience / no evidence	N/A	Guidance document developed, pilot implementation planned for year 2

Sub-objective 5. Infection control

5.1 Compliance with quality TBIC measures in health care, community and congregate settings ensured

In APA 1, planned activity under this intervention area was to monitor TB-IC implementation in the two regions and integration of TB-IC in the QUAL-TB tool is the first step to ensure implementation.

5.2 TB surveillance among HCWs ensured

It was planned to obtain data in the two regions and based on the completeness and accuracy of the data, to organize a sensitization workshop to discuss the importance of this indicator. The baseline assessment has been finalized and the information collected will be used for year 2 action plan.

Key results

- Drafted QUAL-TB tool incorporated TB IC standards for monitoring implementation (finalization, endorsement will be in year 2)

- The HMIS TB register has a place to document type of profession for TB cases diagnosed; however, it's not a reportable indicator to the next higher level. Sensitization and use of this data in the two regions will be the next years agenda.

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target Y1	Result Y1
5.1.1.	Status of TB-IC implementation in health facilities	**Description:** This indicator measures the status of TB IC implementation in health facilities. **Indicator value:** Score based on below: 0=no TB IC policy/plan and no organized TB-IC activities; 1=national TB IC guidelines have been approved and disseminated in accordance with WHO policy; 2=TB IC being implemented in pilot or limited health facilities; 3=TB IC implemented nationally and/or national certification program implemented **Level:** National	2	2	2
5.1.2.	#/% of health facilities implementing TB IC measures with Challenge TB support (stratified by TB and PMDT services)	**Description:** Proportion of health facilities implementing TB IC measures with Challenge TB support (stratified by TB and PMDT services) **Indicator Value:** Percent **Level:** National and Challenge TB geographic areas **Numerator:** Number of health facilities implementing TB IC measures with Challenge TB support in the area **Denominator:** Total number of health facilities in the area	N/A	N/A	(CTB project has not been able to start intervention, for reasons – office & team establishment, baseline assessment)
5.2.3.	#/% of HCWs diagnosed with TB annually	**Description:** This indicator measures the percent of HCWs diagnosed with TB (all forms) annually (disaggregated by gender and age). This measurement may require special study using a valid tool. **Indicator Value:** Percent **Level:** National and Challenge TB geographic areas **Numerator:** Number of HCWs diagnosed with TB (all forms) during past year **Denominator:** Total number of HCWs in the same year	Baseline assmt result: Tigray: 26/5537 (0.5%) SNNPR: 11/818 (1.3%)	N/A	N/A

Objective 3. Strengthened TB Platforms

Sub-objective 7. Political commitment and leadership

7.3 Leadership and management competencies and capacities of NTP ensured: major planned activity for year one was to support the ongoing NTP programmatic activities through WHO.

Key results:

- Continued technical assistance provided to the NTP and Regional Health Bureaus in two Challenge TB focus regions, SNNPR and Tigray, to strengthen the coordination and program management capacity for TB control.
- Terms of Reference (TOR) were revised to maintain the functionality of the national TB/HIV technical working group (TWG).
- A community based TB care technical working group (CTBC TWG) was established to support the NTP in planning, implementation and monitoring of the community based TB prevention and control interventions.
- WHO Country office supported NTP for the revision of the National Tuberculosis Program supportive supervision checklist. The revised checklist is intended to be used as primary tool for monitoring the TB prevention and control activities at regional, zonal/woreda, health facility and community level, and the tool was tested in the field.
- A national level supportive supervision and TB program review meeting was supported to strengthen the TB program management.
- Continued technical assistance was provided to the Regional Health Bureaus in planning, coordinating and facilitating joint supportive supervisions and TB program review meetings with the purpose of monitoring the progress of TB program implementation in the two focus regions.

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target Y1	Result Y1
7.3.	Functionality of National Technical Working Groups	Description: Measure implementation of NSP Indicator Value: Percent of TWG/TFs meetings conducted Level: national and the two regions Source: national and regional MOH Means of Verification: Numerator: number of TWG/TFs meetings conducted Denominator: number planned	100% (4/4)	100% (4/4)	100%(4/4)

Sub-objective 8. Comprehensive partnerships and informed community involvement

8.2 Global Fund grant ratings improved: In APA 1, planned activity was to coordinate and provide support to the NTP by WHO to establish partners' forum and regular meetings. And, to assess the benefit of CTB involvement in the CCM

Key results:

- CTB/WHO technically supported the NTP in GF New Funding Model grant making i.e. development of detailed implementation plan for GF including the implementation plan for the incentive funding for community based TB care.
- CTB/WHO also supported the oversight committee field visit to monitor the implementation of the GF grant.
- Opportunities and benefits were assessed to define the role of Challenge TB in CCM.

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timefra me)	Target Y1	Result Y1
8.2.4	Number of TB partners meetings held	Description: Number of TB partners meetings held over the reporting period Indicator Value: number per quarter Level: national Source: minutes of meetings available Means of Verification: Check with chair of meeting Numerator: Number of meetings held Denominator: number of quarters passed	0	2	0 [WHO has been trying to discuss this issue, but establishment of partners forum has not been successful. NTP regularly meets with partners through TWG & other adhoc meetings]

Sub-objective 9. Drug and commodity management systems

9.1 Well functioning procurement and supply chain management system in place

Support NTP in Forecasting & Quantification of anti-TB drugs & lab commodities:In APA 1, plannedactivity under this intervention area was to organize and conduct a workshop on forecasting, quantification and supply planning of anti-TB pharmaceuticals for the nation.

Establish TB supplies tracking system at national, regional & district level using QuanTB tool:The year one planned activity was to orient TB focal person in CTB supported RHB, PFSA, etc on QuanTB tool so that the tool will be used as regular tracking system.

TB Patient Kit implementation: Orientation/sensitization of TB focal person and development and printing of Job Aids on the use of TB PKs were the key activities in year one to promote the TB patient kit implementation.

Strengthen IPLS implementation: The main activities in year one were supporting the training of professionals on IPLS and the revision& supply of LMIS tools in the health facilities.

Key results:

- Forecasting and quantification of anti-TB drugs and lab commodities was previously annually done but this year the GF requested NTP to prepare a supply (procurement) plan taking the forecast from the previous year. The workshop on forecasting and quantification could not be conducted and the activity and budget is moved to APA2.

- NTP requested CTB technical support to upgrade the current QUAN TB tool so that it will be more user friendly and easy to access at regional & lower level. Therefore, the planned activity could not be achieved.

- The implementation of patient kit in the seven zones of CTB supported regions was not satisfactory and result showed that in SNNPR for example, only 40% of the facilities started using the kit and only 47% were trained on the use of the kit. With the aim to improve the use of patient kits and minimize stock-out rate, CTB technically supported and drafted job aids on the use of the TB Patient kit at the health facilities and NTP planned for consultative and finalization workshop in Nov 2015. CTB planned to support the printing and distribution of the tool to all TB clinics in the two regions. In addition, CTB supported financially and technically for the training of 157 TB focal persons.

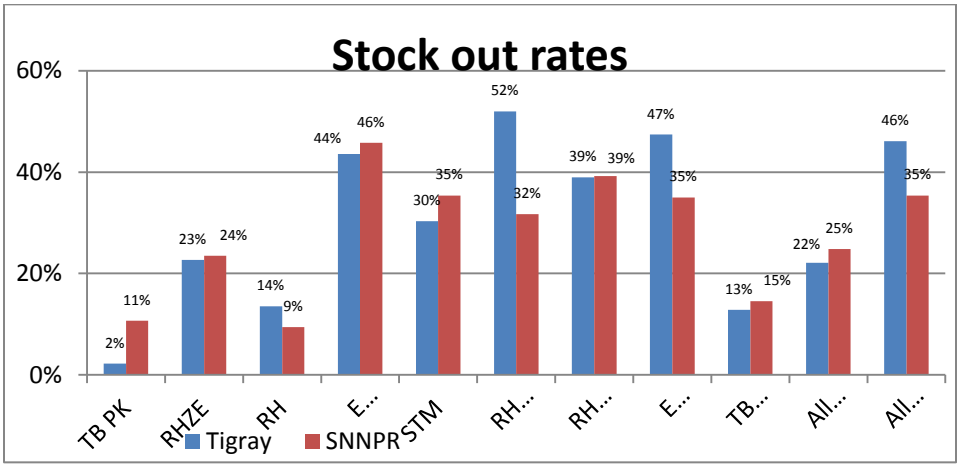
- Regional, zonal, woreda and facility level assessments were conducted in three zones in Tigray and four zones in SNNPR. CTB has measured different DSM indicators for the first time in these regions. In Tigray stock out rates for adult drugs were calculated and were found to be 2% for TB PK, 23% for RHZE, 13% for RH, 44% for Ethambutol 400mg and 30% for Streptomycin. The rate for the drugs used to treat new TB cases (TB PK+RHZE+RH) is 13% and for rate for all the adult drugs is 22%. A higher stock-out rate was found for pediatric drugs: 52% for RHZ, 39% for RH, 47% for E 100mg and the total stock out rate for the three pediatric drugs is 46.1%. The rate was 14%, 22% and 15% for 3% acid alcohol, carbolfuchsin and methylene blue respectively. In the SNNPR the rates were 11% for TB PK, 23% for RHZE, 9% for RH.

- The baseline assessment showed that the level of implementation of the Integrated Pharmaceutical and Logistics System (IPLS) was not satisfactory mainly due to shortage of trained pharmacy professionals and shortage of LMIS tools used to implement IPLS. So in order to improve the recording, reporting and requisition of TB pharmaceuticals by HFs thereby improving their supply & management, CTB in collaboration with SNNPR and Tigray RHBs and PFSA trained a total of 443(F=133) pharmacy professionals. Upon their return to work CTB anticipates that the recording and reporting will be improved thereby reducing stock out of TB pharmaceutical in successive quarters.

- CTB participated in a National Consultative Workshop in Addis Ababa on the Customs & Regulatory Requirements of TB Commodities which was organized by the Federal Ministry of Health on March 18, 2015. The workshop aimed to help facilitate a clear understanding of the country's regulatory and customs requirements for the smooth import and expedited clearance of TB supplies. This improved understanding will reduce the shortage of TB Program supplies (anti-TB drugs, laboratory reagents, and other supplies) due to failures from suppliers or consignee's as well as from procuring institutions failing to fulfill the country's regulatory and customs requirements. The workshop also helped to reduce significant damages to health products and avoid large demurrage costs.

- Since there was a recurrent problem in forecasting the needs and procurement plan for small quantity anti-TB drugs (i.e. Ethambutol, Streptomycin, pediatric formulations, anti-Leprosy drugs and Second Line Drugs), CTB technically supported the development of a national plan for the distribution of a small quantity (volume) anti-TB drugs. A final draft document has been prepared and the FMoH will organize a meeting with stakeholders for its final endorsement.

Table 1: Stock out rates measured in Tigray and SNNPR regions



#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target Y1	Result Y1
9.1.1.	# of stock outs per [year] of anti-TB drugs, by type (first and second line) and level (ex, national, provincial, district)	**Description:** The number of stock outs per year of anti-TB drugs, by type (FLD and SLD), and level (national, provincial, district) **Indicator Value:** Number **Level:** National and Challenge TB geographic areas **Numerator:** The number of stock outs of anti-TB drugs during past year	12.8%* (Tigray) 14.%* (SNNPR)	N/A	In APA2, it will be measured as part of regular supportive supervisions . This will be a new system going to be developed by CTB with advocacy to make it a national activity.
9.1.3.	% of laboratories conducting TB testing that had a reported stock-out of laboratory commodities	**Description:** This indicator measures the percent of laboratories conducting TB testing that had a reported stock-out of laboratory commodities by type of laboratory (microscopy, C/DST, Xpert) **Indicator Value:** Percent **Level:** National **Numerator:** Number of laboratories conducting TB testing that had a reported stock-out of laboratory commodities during reporting period **Denominator:** Total number of laboratories conducting TB testing during the same period	Tigray: Acid alcohol=15 %; carbonfuscin e=21%; methylene blue=15% SNNPR: Acid alcohol=16 %; carbonfuscin	N/A	Activity initiated

			e=16%; methylene blue=17%		

* Stock out rate for TB PK+RHZE+RH

Sub-objective 10. Quality data, surveillance and M&E

10.1 Well functioning case or patient based eRR system in place

Improved data quality: Main activity planned for year one was to develop an eRR system approach (through external TA) and to discuss with a larger consultative meeting.

Support the data quality assessment in the two regions: planned to develop M&E mentoring approach as part of supportive supervision including the integration of RDQA tool in the supervision checklist.

10.2 Epidemiologic assessments conducted and results incorporated in to the national strategic plan

Support TRAC & promote the conduct of OR and usage of results:the planned activities for year one of CTB support were, providing financial & technical support to organize the annual TB research conference, co-organize the regular TRAC meetings, share/disseminate OR results during the TRAC conference, sponsor at least one person for international GIS course, and revise the national OR roadmap and long term strategy.
Support the TB OR grant scheme:CTB planned activity in year one, on CTB technically relevant OR, to evaluate and ensure the ORconducted quality and standards through external TA

Key results:

- As part of improving the data quality in TB, TB/HIV and MDR-TB, establishing case based eRR through the support of external TA has been started in year one. As the first step, the general flow and status of TB reporting system has been thoroughly assessed (opportunities & major gaps) and discussed with NTP, the national HMIS program staff, regional HMIS & TB program people and health facility (TB clinic) staff. The general approach was briefed to the NTP and the way forward has been outlined (for action in the subsequent years).
- A routine data quality assessment (RDQA) tool was developed in year one and integrated in the regular supportive supervision checklist (in year 2) for routine use and continuous improvement of data quality in the two regions.
- The national TB epidemiologic data are available from the routine R & R system which is in line with the WHO guidelines, and these data has been used for annual planning and strategic development at national level. Moreover, in year one CTB has supported technically and financially the organization and conduct of the annual national TB research conference (March 21-23, 2015). During this conference the four OR conducted with the support of TB CARE I were presented
- CTB also supported in organizing the regular TRAC core members meeting (2x) for the purpose of assessing the status and current relevance of the national OR roadmap (developed in 2012/13 through TB CARE I support) and to discuss the long term plan on the national OR strategy and priority setting. The national OR priority agendas were outlined and expected to be finalized and endorsed in year two.
- Through CTB sponsorship, one M&E staff from CTB attended the international GIS course. Afterwards discussions were held with national HMIS staff & NTP, which resulted in the development of a concept note and plan of action to cascade the skill & knowledge to the national program as well to the two CTB regions.
- A competitive OR grant through TRAC was established during TB CARE I support, and this has been pursued in CTB year one. CTB organized a call for LOI for TB OR grant on current TB OR

priority agendas for regional OR teams (TB CARE I trained OR regional teams). 17 LOI were submitted and reviewed, of which six were invited to submit a full proposal.

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target Y1	Result Y1
10.1.4.	Status of electronic R&R	**Description:** This indicator measures the status of electronic recording and reporting (ERR) **Indicator value:** Score based on below: 0=R&R system is entirely paper-based; 1=electronic reporting to national level, but not patient/case-based or real time; 2= patient/case-based ERR system implemented in pilot or select sites (TB or MDR-TB); 3=a patient/case-based, real-time ERR system functions at national and subnational levels for both TB and MDR-TB; 4= a patient/case-based, real-time ERR system is functional at national and subnational levels for both TB and MDR-TB completely and meets WHO standard for TB surveillance data quality - i.e., data in the national database are accurate, complete, internally consistent, within timelines set, validated and free of duplicates and a data quality audit system is put in place (source: Standards and Benchmarks for Tuberculosis Surveillance and Vital Registration Systems – Checklist and User Guide, WHO, 2014). **Level:** National	1	1	1
10.2.4.	#/% of operations research, evaluation or epidemiological assessment study results disseminated (stratified by level of dissemination: report, presentation, publication)	**Description:** This indicator measures the number and percent of studies (operations research, evaluation or epidemiological assessment), results of which have been disseminated (stratified by level of dissemination: report, presentation, publication) **Indicator Value:** Percent **Level:** National **Numerator:** Number of studies with results disseminated during the reporting period **Denominator:** Total number of studies conducted during the reporting period	90%	100%	There was no sponsored OR in year one

Sub-objective 11. Human resource development

11.1 Qualified staff available and supportive supervisory system in place

Planned activity for year1 was to support FMOH HRD strategy through strengthening supportive supervision, conduct joint supportive supervision to the zones to build HR capacity of the RHBs to strengthen supportive supervision capacity at regional, zonal and woreda level.

Key results:

- In SNNPR regional level TB program specific supportive supervision was conducted in all zones and special woreda of SNNPR. This was unique in terms of its regional coverage with involvement of different regional partners. Challenge TB supported the RHB in the revision and development of TB program specific supportive supervision checklist. Additionally, both technical and financial assistance was provided to carry out the supervision as planned. The supportive supervision was action oriented, and conducted with the aim of identifying the strengths, and major areas of improvement for TB program across all levels. It has also addressed various aspects of the TB program including coordination and management both at the zone and woreda level, TB related service delivery at the facility level and community TB implementation in the health posts. Moreover, technical and financial support was also provided to RHB to conduct integrated supportive supervision focusing on data quality in SNNPR. The supervision has addressed the data recording and reporting issues of different health programs. The major findings of the supervision were documented and appropriate recommendations drawn to further improve the data quality in the HMIS.

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target Y1	Result Y1
11.1.3.	# of healthcare workers trained, by gender and technical area	**Description:** This indicator measures the number of healthcare workers trained, by gender and technical area **Indicator Value:** Number **Level:** National and Challenge TB geographic areas **Numerator:** Number of HCWs trained during the reporting period	No baseline		974 (M=681, F=293)
11.1.4.	Quality supervision	Description: supervision conducted with "quality tool" Indicator Value: Level: region Source: supervision reports Means of Verification: filled tools Numerator: Number of visits with use of tool Denominator:Total number of conducted supervision	No baseline	Quarterly (4/4)	(Supervision quality tool drafted)

4. Challenge TB Support to Global Fund Implementation

Current Global Fund TB Grants

Name of grant & principal recipient *(i.e., Tuberculosis NFM - MoH)*	**Average Rating***	**Current Rating**	**Total Approved Amount**	**Total Disbursed to Date**	**Total expensed** *(if available)*
ETH-T-FMOH	B1	N/A	110,752,774	53,738,847	3,778,365

** Since January 2010*

In-country Global Fund status - key updates, current conditions, challenges and bottlenecks-

The new funding model for TB financial support has been signed in July 2015. In the past GF implementation issues were fund utilization and liquidation in the country has been the major challenge.

Challenge TB involvement in GF support/implementation, any actions taken during Year 1

CTB has not been significantly involved in APA 1 as the PR (MOH) was in the grant making process. However, CTB has technically and financially complimented the assessment of community TB care implementation which is part of the GF incentive funding.

5. Challenge TB Success Story

October 2015:

When 8 years old Workinesh Cheru boards on the bus to Addis Ababa in 2014, she was not looking forward to see Addis's city vibe but to end her suffering which she had been struggling with for 6 months. After her parents got a divorce and she moved to a small town of Sebeta, 23km from Addis, to live with her step sisters, she was diagnosed as Extra Pulmonary TB involving the lymph nodes on her neck.

After she was diagnosed at Sebeta Health Center she started with first line anti TB treatment. Despite the treatment, Workinesh failed to respond and she was referred to St. Peter TB specialized Hospital in Addis for further investigation and management.

Workinesh was diagnosed as extra pulmonary Multi drug resistance–TB (MDR-TB) after a sample was tested from the swelling on her neck by a new diagnostic test called GeneXpert.The team at St. Peter hospital then decided to put her on MDR-TB regimen. Workinesh's mother who lives close to yet another hospital with advanced MDR-TB facility (ALERT Hospital) requested to follow up her daughter's case at that Hospital and Workinesh was admitted for five days. After five days of treatment Workinesh was discharged to continue her treatment in the nearby health center as an ambulatory patient.

USAID supported TB and MDR-TB program in Ethiopia through its three consecutive projects TB CAP, TB CARE I, as well as Challenge TB. Ethiopia ranks among the 27 MDR-TB high priority countries in the world and USAID has been working closely with the Federal Ministry of Health to strengthen TB control activities through renovation of MDR TB ward at ALERT Hospital, establishment of training center at Saint Peter hospital and various patient centered supports resulting increased capacity to successfully manage drug-resistant TB. The life of Workinesh and thousands of TB patients are now being saved in these facilities.

After Workinesh started treatment, she showed marked improvement. "Her progress has been amazing" said her mother, who was treated and got cured from a similar illness before Workinesh was born.

Workinesh has been visiting the nearby health center every morning to take her medicine for the past 19 months. She also receives food baskets and 100ETB monthly transport allowance. "She sometimes has minor vomiting and she was treated for that. Otherwise she tolerated the treatment very well" added her mother.

Workinesh now smiles and plays with her friends in a small neighborhood at the outskirt of Addis until the next school year starts.

The current five years USAID project, challenge TB, also aspires to save more lives by supporting the national TB program through improved access to high-quality patient-centered TB, DR-TB & TB/HIV services, prevention of transmission and disease progression as well as strengthening TB service delivery platforms. Challenge TB also gives a due emphasis on pediatric TB and assisted the National TB program in the development of National Childhood TB Roadmap in collaboration with partners.

6. Operations Research

Title of OR study	Implementation Status	Key findings	Dissemination
Quality of TB care service in Ethiopian Somali Regional State Public Hospitals and Health Centres, Eastern Ethiopia	Full proposal development**		
Geographic Patterns of Drug Resistant Tuberculosis Transmission in Addis Ababa, Ethiopia.	Full proposal development		
Assessment of Sputum Quality & associated factors in predicting AFB smear positivity among pulmonary Tuberculosis suspects in Harari Regional State, Harar, Ethiopia.	Full proposal development		
Effectiveness of multi drug resistant tuberculosis specimen referral system through postal service in Amhara Region, Ethiopia	Full proposal development		
Intensive phase Rx outcome & contributing factors among patients treated for MDR in Ethiopia	Full proposal development		
The Additive value of Xpert MTB/RIF TB diagnostic tool at Mekelle Hospital , Tigray region, Northern Ethiopia	Full proposal development		

** These are team of RHB, university & other health staff who have been trained on OR under TB CARE support. Review & decision will be made in Dec 2015

7. Key Challenges during Implementation and Actions to Overcome Them

Objective/Sub - objective/Intervention area	Key challenges	Actions	Responsible person / institute	When
1. Under budgeting of the cost needed for the baseline assessment affected the baseline assessment activity	Budget shortage for planned activities	a modification tracker (MOT) to mobilize more funds.	CTB team	done
2. Urban TB was one of major intervention area however, no clear activities planned despite dedicated team for this intervention area	Delayed/cancelled STTA	Communicate on the challenges to address it in the next year plan	CTB/Urban team	done
3. Addressing prison TB	No national policy	Stakeholders meeting and continuous communication with NTP & prison admin	NTP in collaboration with key stakeholders	Year 2
4.Data quality (HMIS)	Major TB data quality problem at HF/Woreda level due to skill gap of data focal person (HIT)	Capacity building planned activity (training, RDQA tool and regular supportive supervision)	CTB & RHB	Year 1 & 2
5. eRR implementation (piloting)	Not in the agenda or priority for NTP/HMIS	Need for sensitization, follow up plus STTA	CTB, MoH/NTP/HMIS	Year 1, 2

The major implementation challenges encountered during APA 1 were:

- Delayed project approval;
- The scope of the project at regional level (i.e. regional support coverage versus regional team capacity) was not clear and considerable time was needed for discussions before this was resolved;
- Establishing new offices and recruitment of new & competent staff was not easy and took time;
- The development of comprehensive tools and conducting situational assessment took almost 3 months;
- The national election in the period of June 2015 delayed the planned assessments, etc.

8. Strengths/Lessons Learnt/Next Steps

- Well timed and detailed analysis of the existing situation (gaps, opportunities) during planning process are critical for implementation.

- Ownership and leadership by the NTP of activities such as urban TB, prison TB and piloting eRR would be a major issue (for the reason that, activities are new, no clear policy or guidance from NTP, no expertise in the country, etc) to be addressed for the coming years of CTB support.
- Competent staff at regional level is essential for smooth implementation of planned SOW.

Annex I: Year 1 Results on Mandatory Indicators

<table>
<tr><th colspan="6">MANDATORY Indicators</th></tr>
<tr><td colspan="6">Please provide data for the following mandatory indicators:</td></tr>
<tr><td>2.1.2 A current national TB laboratory operational plan exists and is used to prioritize, plan and implement interventions.</td><td>National APA 1</td><td>CTB APA 1</td><td>CTB APA 1 investment</td><td colspan="2">Additional Information/Comments</td></tr>
<tr><td>Score as of September 30, 2015</td><td>1</td><td>N/A</td><td>Limited</td><td colspan="2">The operational plan is developed annually by the national reference lab as well as by the respective regional labs & the plans are in local language</td></tr>
<tr><td>2.2.6 Number and percent of TB reference laboratories (national and intermediate) within the country implementing a TB-specific quality improvement program i.e. Laboratory Quality Management System</td><td>National APA 1</td><td>CTB APA 1</td><td>CTB APA 1 investment</td><td colspan="2">Additional Information/Comments</td></tr>
<tr><td>Number and percent as of September 30, 2015</td><td>8 out of 9 (89%)</td><td>N/A</td><td>Limited</td><td colspan="2">
<table>
<tr><td>S/N</td><td>TB RRLs</td><td>Base Line</td><td>ASLM</td><td>GLI</td><td rowspan="3">3rd round assessment will be held soon before application</td></tr>
<tr><td>1</td><td>Adama RRL</td><td>1 STAR</td><td>2 STAR</td><td>NA</td></tr>
<tr><td>2</td><td>NTRL</td><td>ZERO</td><td>3 STAR</td><td>4 STAR</td></tr>
</table>
</td></tr>
</table>

				3	Bahirdar RRL	ZERO	3 STAR	NA	
				4	Harar RRL	ZERO	2 STAR	NA	
				5	Hawasa RRL	ZERO	2 STAR	NA	
				6	Mekele	ZERO	2 STAR	NA	
				7	St Peter	ZERO	2 STAR	NA	
				8	Jimma	ZERO	2 STAR	NA	

Annex II: Status of EMMP activities

Activity carried out	Year 1 Mitigation Measures	Status of Mitigation Measures	Outstanding issues to address in Year 2	Additional Remarks
Availing and Training on AFB microscopy (Zn & LED) Training patient kit & IPLS	It will be ensured that in all training activities of health care and TB control staff due attention is paid to point out potential environmental impact of medical waste outlining the need for and ways to mitigate any negative impact. Specifically drug supply & management, laboratory capacity building (e.g. Xpert roll out, cartridge disposal, culture facility west management, sample transportation, etc) and general TB infection control trainings would incorporate and address issues related to potential transmission at different levels of the health system. The Healthcare Waste Management Minimum Program Checklist and Action Plan (Annex 1) will be shared anddiscussed at the level of the MDR-TB treatment centers and Xpert sites	Proper waste disposal procedure was followed during the practical sessions This was monitored during the training and installation of LED by technical experts of challenge TB	None	
Septic tank installation	Under APA1 the installation of a septic tank for the Yirgalem MDR-TB ward is approved. This installation will solve the outstanding issue of access to proper sewage system for the ward. Installation will be done obeying the laws of Ethiopia taking due care of potentialenvironmental impact.	Proper design and site selection in consultation with the hospital administration, contractor and Challenge TB's architect Installation completed and hospital administration sent confirmation of its completion. Challenge TB's contracted architect approved for provisional acceptance.	None	